

WHAT IS CLAIMED IS:

1. A portable therapeutic device for healing a wound comprising:

a transducer having:

5 an operative surface for emitting ultrasound; and

an axis; and

a focusing element for focusing the propagation of the ultrasound at a predetermined angle with
10 respect to the axis toward the wound for healing thereof.

2. The portable therapeutic device of claim 1 wherein the transducer includes the focusing element.

15 3. The portable therapeutic device of claim 1 further comprising:

a reflecting medium configured to reflect ultrasound; and

wherein the focusing element focuses the
20 ultrasound to propagate toward the reflecting medium to reflect the focused ultrasound to propagate in the direction of the wound for the healing thereof.

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4. The portable therapeutic device of claim 3 wherein the reflecting medium includes bone tissue.

5 5. The portable therapeutic device of claim 3 wherein the reflecting medium includes skin tissue.

6. The portable therapeutic device of claim 3 wherein the reflecting medium includes an inorganic ultrasound reflecting composition disposed within a body
10 having the wound.

7. A portable therapeutic device for healing a wound comprising:

a transducer having:

15 an annularly shaped operative surface for emitting ultrasound toward the wound for healing thereof.

8. The portable therapeutic device of claim 7
20 wherein the annularly shaped operative surface is configured to encircle the wound and to emit the ultrasound to be propagated toward the wound for the healing thereof.

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9. The portable therapeutic device of claim 8 wherein the annularly shaped operative surface propagates the ultrasound as longitudinal waves to generate shear waves therefrom at an internal surface of the wound for the healing thereof.

10. The portable therapeutic device of claim 7 wherein the transducer includes:
a woven fabric substantially conductive of ultrasound and substantially surrounding the annularly shaped operative surface.

11. The portable therapeutic device of claim 10 wherein the woven fabric includes:
a plurality of pores therein; and
an ultrasound conductive gel retained by the plurality of pores for providing ultrasonic conductivity between the annularly shaped operative surface and a portion of skin substantially adjacent to the woven fabric.

12. The portable therapeutic device of claim 1 further comprising:

a fixture structure, extending about a portion of the body having the wound, for positioning the transducer substantially adjacent to a portion of skin substantially adjacent to the wound.

13. The portable therapeutic device of claim 12 wherein the transducer includes a rod-shaped operative surface having an axis for emitting the ultrasound radially toward the wound for the healing thereof.

14. The portable therapeutic device of claim 12 wherein the fixture structure includes an adjustable strap.

15. A method for healing a wound comprising the steps of:

positioning a transducer having an operative surface substantially adjacent to the wound; and

emitting ultrasound from the operative surface toward the wound to contact the wound for causing the healing thereof.

16. The method of claim 15 wherein the step of emitting includes the step of:

propagating the emitted ultrasound as longitudinal ultrasonic waves.

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17. The method of claim 15 further comprising the step of:

generating shear waves from the emitted ultrasound in the region of the wound for causing the healing thereof.

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18. The method of claim 15 further comprising the step of:

reflecting the emitted ultrasound toward the direction of the wound.

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19. The method of claim 18 wherein the step of reflecting includes the step of:

reflecting the emitted ultrasound by bone tissue.

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20. The method of claim 18 wherein the step of positioning the transducer includes the step of:

positioning the transducer substantially adjacent a first layer of skin; and

5 the step of reflecting includes the step of:
reflecting the emitted ultrasound by a second layer of skin.

21. The method of claim 18 further comprising the
10 step of:

inserting an inorganic reflecting medium into a region substantially adjacent to the wound; and

wherein the step of reflecting includes the
step of:

15 reflecting the emitted ultrasound by the internally disposed inorganic reflecting medium.

22. The method of claim 15 further comprising the
steps of:

20 indenting a portion of skin to form a cavity therein; and

the step of positioning the transducer includes the steps of:

positioning the transducer within the
cavity; and
orienting the operative surface
substantially in the direction of the wound.

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